DMC Digital Multimedia Console Product Profile

The New Digital Multimedia Console from AMS NEVE

Builds on the legendary success of the Academy award winning DFC Gemini film mixing console.

Designed for optimum mix capabilities at an incredible price.

Priced to allow customers to own a full AMS NEVE mixing console and DAW controller for the price of a DAW controller.

Gives the legendary AMS NEVE sound, EQ and Dynamics to all your mixes.

Full Stereo and 7.1 surround monitoring modes revered by AMS NEVE console users worldwide.

Allows a full AMS NEVE mixing solution without being tied to one DAW manufacturer.

Comprehensive High-Definition Capabilities
6 Dual-layer Banks allow the biggest of mixes in the most compact surface.

Automation and desk setups fully compatible with DFC,88D and MMC

Stereo and full 7.1 multi-stem surround monitoring modes.

Featuring the same processing engine as the legendary 88D and DFC.

TFT meter bridge with ViewMix™ as standard. Level and dynamics metering, Graphical EQ and WavTrack™ display per path.

Expandable to 500 paths with sample rates up to 384KHz.

System Components

The Logic DMC digital mixing console consists of four main parts – the mixer control surface, the digital processing system, the audio Input and Output system (I/O) and the Encore computer.

The Logic DMC control surface is supplied in a variety of frame sizes. A simple layering system allows a large number of channels to be controlled from a compact, convenient working area. The console can be configured with 2 main layers and 6 banks. In addition to the motorised main faders, each strip also has a Logicator that can be assigned as a rotary small fader to a second layer of inputs. This second input can be swapped onto the main fader at any time using the local FLIP key. The user may customise the layout of signal paths (channels, tracks, groups, aux masters etc.) on the Logic DMC surface. Six layouts ('Banks') may be stored and subsequently recalled with a single key press.

The DMC processing system uses the AMS Neve fourth generation XSPM modular processing cards. The XSPM cards provide the processing power for all signal processing, mixing and routing functions Soft configuration enables the console to be tailored to suit the requirements of individual projects.
Comprehensive processing in each channel is provided in the standard package.

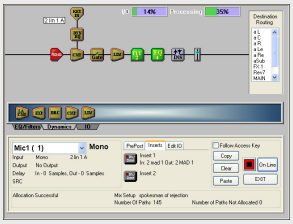
The input/output system provides analogue and digital audio connections to other equipment. This system is connected to one or more modular I/O racks via MADI multichannel connections. Interfaces are available in a wide range of formats, including 24-bit analogue conversion, AES-EBU digital. Integral support for the MADI standard means that MADI-equipped routers and equipment can be connected directly.

The Encore computer uses Windows XP Pro for the user interface for project management and console configuration. Custom configuration files and automation data used for projects can be loaded and saved, and a DVD drive is provided for project transfer and archiving. Project data is directly compatible with other AMS Neve consoles including the Digital Film Console (DFC), PS1, MMC and Libra consoles.

The modular nature of the console means that future expansion is easy. For example, the number of mix channels can be increased by adding processing without affecting or expanding the control surface.

Soft Processing

Typical system specifications for Logic DMC include 4 band EQ, high and low pass filters, and a DRC compressor for all main input channels.



A major advantage of the soft processing engine is that processing can be re-configured according to the needs of individual projects.

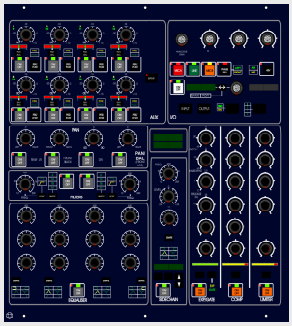
Any channel or output (including groups and aux sends) can be mono or stereo to suit the track-lay and delivery requirements of the project.

Desk Setups

The current soft processing configuration is stored as a user definable Desk Setup, which also stores current control settings and the routing configuration.

The console is supplied with a default Desk Setup.

Control Layout



The Logic DMC is by far the most intuitive digital audio console. AFU features are easily and rapidly accessed, still maintaining the right balance of user feedback of channel parameters and automation status.

Limiter

The limiter has individual Logicators for threshold, attack time, release time, knee shape and make-up gain. With the sidechain EQ switched in this processor also makes an efficient de-esser.

Compressor

The compressor has individual Logicators for threshold, ratio, attack time, release time, knee shape and gain make up. Digital processing allows relatively high levels of compression without unpleasant side effects.

Expander / Gate

The Expander / Gate has individual Logicators for threshold, ratio, attack time, release time, Knee shape/hysteresis and depth. Hysteresis is the difference in level between the gate turning on and turning off again - this is useful for preventing the tail of a reverb being gated (regardless of the decay time) without having to set the threshold so low that the gate falsely triggers.

The Expander and Gate can be engaged simultaneously.

Sidechain

The sidechain EQ has individual Logicators for Q/shape, level and frequency. The EQ has a full spectrum range of 12Hz to 20 kHz, a Q between 0.1 and 10, and up to 24dB of cut and boost. The EQ can be set for shelf, bell, notch or HP/LP filter shapes and the resultant side chain signal can be monitored using the listen switch. EQ this powerful gives total control over the dynamics processing.

The sidechain panel also allows the sidechains of multiple channels to be ganged or an independent input to be used as the keying signal by using the KEY/LINK key together with the UP/DOWN keys to select the side chain source.

Banks & Layers

A simple yet powerful layering system allows a large number of input channels to be controlled from a compact, convenient working area. Six user defined desk layouts ('Banks') can each contain a main layer, plus a second sub-layer of inputs.

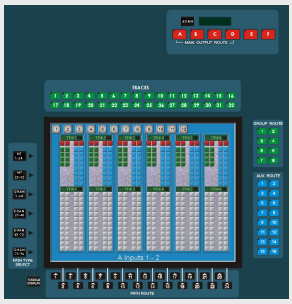
Fader Strips

In addition to the motorised main faders, each strip also has a Logicator that can be assigned as a rotary small fader to a second layer of inputs.
This second input can be swapped onto the main fader at any time using the local FLIP key.

The fader area also contains key controls and status displays for the assigned channel, including a signal present indicator, gate/compressor meter, cut and solo keys, pan control and an electronic scribble strip for naming channels.

The Access key calls the channel to the Assignable Facilities Unit for adjustment.

Routing Section



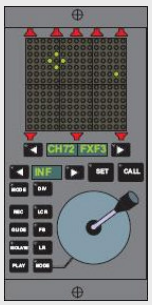
The dedicated colour TFT routing screen displays routing information for all channels and outputs in a central location. There are dedicated Channel and output routing keys here so that routing can also be performed centrally. Router settings are saved as a part of the console configuration (Desk Setup) and can therefore be recalled.

Surround Mixing

DMC features advanced surround mixing features developed for the AMS Neve Digital Film Console. Automated Logicator and joystick panners enable the creation of complex surround effects.

The multi-stem routing system enables the creation of several different versions of a mix simultaneously, including separate dialogue, music and effects stems, international versions, and mixes in different surround formats. DMC supports all current and foreseeable major surround formats, including LCRS, Dolby Digital/DTS, Dolby EX, SDDS and Imax.

Joystick Module



The panning of any channel may be controlled using the joystick module. Complex surround effects can be built-up on any number of channels by storing joystick and Logicator moves using automation.

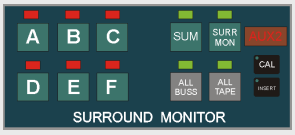
Multi-Stem Output System

The Logic DMC console has up to 32 stem recorder busses. These busses are in addition to all other output busses, including audio groups, auxiliaries and monitoring outputs. The 32 busses can be split into different sets, or ‘stems’, each up to 8 tracks wide, with designated Stems A, B, C, D, E & F.

A typical application for stem mixing during a 5.1 format mix is to create separate dialogue, music and effects 5.1 format mixes simultaneously. These can then be recorded and monitored individually or combined together, enabling the operator to keep in control of complex large mixes while maximising creative flexibility.

Advanced stem features include the ability to configure different stems in different surround formats and a stem down-mix feature, enabling simultaneous creation of multiple format mixes.

Stem Monitor



The Stem Monitor selector keys therefore enable the user to instantly compare different versions of the mix, including mixes in different formats.
An Insert is provided for an appropriate surround encoder / decoder and stereo and mono modes enable the compatibility of surround mixes to be checked.

Stereo Monitoring Section

In addition to the Surround Monitoring section, the stereo monitoring section features a common selector panel that allows independent selection of Main, Group and Aux send outputs and up to 16 external inputs.

Each monitor output panel has an electronic scribble strip to display the signal being monitored and an independent volume control.

Metering

The TFT meterbridge provides full metering options including EQ curves, dynamics, path information, metering, pan display and Wavtrack™ audio waveform display.

Input / Output Routing

DMC can be configured with any combination of analogue and digital audio input and outputs. A variety of I/O options are available, including analogue (with or without mic preamps) and AES-EBU digital. A number of multichannel digital interfaces are also available to simplify installation and patching of digital machines.

All inputs and outputs are connected to the console via a built-in digital patchbay. This enables any physical analogue or digital input to be connected to any console input channel, and similarly any console output to be connected to any physical destination.
Hence any channel can be fed from any track of any of the external machines connected to the console, and any console output can be fed to any recorder or other destination.
All patching is stored and recalled automatically as part of the Desk Setup.

Built-in support for the MADI standard means that DMC may be connected directly to a wide range of third party MADI routers for facility-wide networking of consoles, enabling studios to share resources.

Input / Output Interfaces

DMC includes one Quad MADI card as standard. The quad MADI card provides 4 bi-directional MADI interfaces through which all I/O to the system is connected. The actual input resolution is usually determined by the interface rack. The MADI outputs may be selected independently for word length (16, 18, 20, 22 or 24 bits) and the correct level of noise weighted triangular PDF dither is applied. The output is correctly limited at maximum digital level. The system can therefore support a range of interface devices between 16 and 24 bits resolution.

DMC sampling rate may be fixed at one of the following standards: 44.056kHz, 44.1kHz, 47.952kHz, 48kHz or 96kHz. Although all digital I/O must be synchronised to the system clock, there are a range of optional inexpensive sampling rate converters available for applications such as vari-speeding and using unsynchronisable sources such as domestic CD players.

Automation

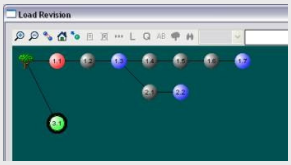
Logic DMC features the AMS Neve Encore Plus™ dynamic automation system for all console mix controls, including faders, panners, EQ, dynamics and aux sends.
The 'Menu-Free Mixing' approach means that mix sessions are fluid and productive, as the user does not have to constantly press buttons and look at screens to control the automation system. Key to this approach is the use of unique touch sensitive Logicator rotary controls and high quality motorised faders.

The global automation keys on the master control panel enable all controls on the console to be placed in a given automation mode. The automation mode indicators on each fader strip and on the Assignable Facilities Unit illuminate to show the selected mode.
The automation mode keys on each channel strip can be used to place individual faders and controls into different modes.

Encore Plus™

Encore provides a number of tools for saving and loading projects, customising console configurations and editing automation.
The system uses the familiar Windows XP Pro user interface, the display and keyboard are mounted externally.

The main Encore screen gives an overview of the current project. Information displayed includes the current Client, Project, Title and Mix Tree names, the list of user labels at selected timecode points, and the current timecode position. The menus and icons give access to the other Encore displays and utilities.



The automation can be viewed graphically as an Automation Tree showing all automation dependencies.

Filing Structure

Encore uses a hierarchical (or tree-like) structure for organising automation data within projects. A user has clients and there can be any number of projects in progress for a particular client. Within projects is the title level, which could be used to separate episodes of a TV series, reels in a film and so on. Within each title can be any number of Mix trees which store the automation passes.

Each Mix Tree is linked to the appropriate Desk Setup, which stores the configuration of the console's soft processing pool. Different Mix Trees can be linked to the same Desk Setup. For instance, all automation data for a project would probably use the same Desk Setup. Also a Mix Tree can be linked to a different Desk Setup if this becomes necessary.

The Desk Setup is in turn linked to an I/O Configuration, and the preferred User Defaults. These can also be changed as required.
The net effect is that when a Mix Tree is loaded for work, all the correct configuration information is loaded at the same time.

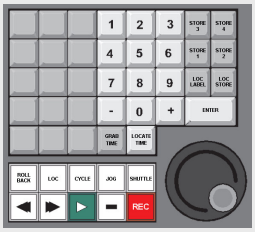
Filing & Archiving

Two separate utilities, Filing and Backup Manager, are used to manage and manipulate all project data.

When starting a new project, the operator can use Filing to load a Desk Setup and other configuration files to suit that style of work. This may then be furthered customised for the project if desired.

Projects can be archived using Backup Manager to the internal DVD drive, an external drive, USB device or any location on a network.
Projects can be transferred directly to other DMC consoles and to other AMS Neve consoles that use Encore, including the Libra Post & Music consoles, Libra Live broadcast console and the Digital Film Console (DFC).

Machine Control



Logic DMC has integral control, which can control up to 6 machines directly via Sony 9-pin protocol connections.

Transport controls are located close to the operator in the central section of the console, and include dedicated DAW controls.

Physical Information:

Rack-Mounting

The rack units should be installed in a 19" cabinet with access to the front and rear.
A rack depth of 700mm minimum is required for clearance of cabling and connectors.
Ventilation panels must be provided to allow a free flow of air both across the rack and from the front to the back. It is recommended that intermediate chassis support rails are used to provide rear support to all units over 3U.

Cooling

No specific air conditioning is required for the racks, provided that there is a free flow of air both across the rack, from side to side, and from front to back, and that the ambient air is maintained below 30°C / 86°F.

The console surface is designed for desktop use - if it is mounted in any type of enclosure the user is responsible for ensuring that there is sufficient air flow to provide adequate cooling.
The bulk power supply requires 150mm (6”) of clearance front and rear to maintain adequate airflow.
As the Encore Processor Unit and MIOS X Rack I/O Unit are fan cooled, it is recommended that they not be sited in noise critical environments.

Power Requirements

Typical power consumption is based on fully populated racks:

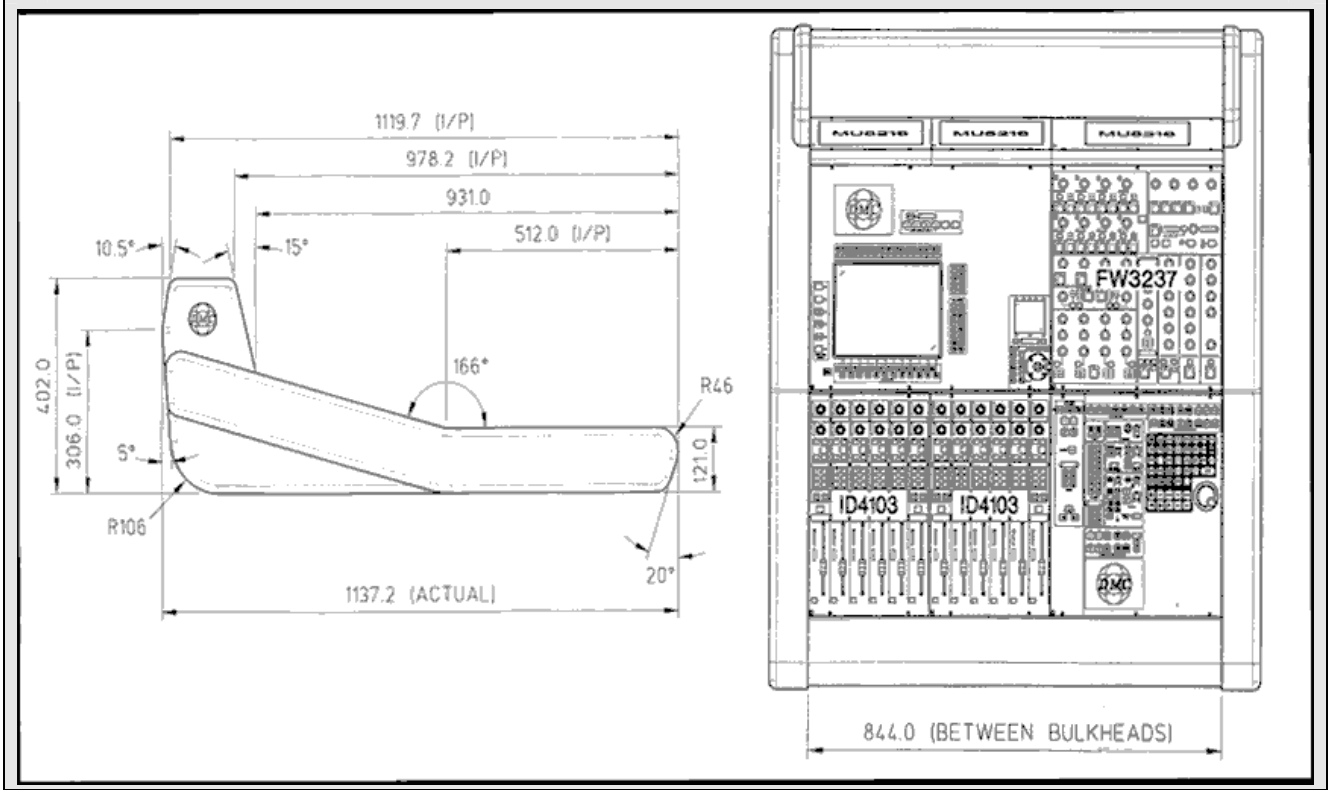
Console	**Maximum Power Ratings**
Redundant PSU **NB: There are 2 modules per PSU**	1200 W Voltage 100 – 240V Current 15A Frequency 47 – 63 Hz

System racks	**Power Consumption (Watts)**
Encore Plus™ Processor Rack	100
SPS Rack	800
MIOS X Rack	150

Rack Type	**U**	**Depth mm / inches**	**Height mm / inches**	**Approx Weight kg / lbs**
Encore Plus™ Processor	4	460 / 18	178 / 7	30 / 66
System SPS	7	572 / 22½	310 / 12¼	50 / 124
MIOS X Rack	4	490 / 19	178 / 7	30 / 66

DMC Digital Multimedia Console Specifications

Console	12 fader surface in table top configuration as standard, fully scaleable.
Processing engine	XSPM processing cards allowing desk setups of around 100 paths as standard. *Additional XSPM processing cards can be added.*
Madi I/O	The engine has 4 madi ports as standard for connection of I/O interfaces. *Additional MADI ports can be added.*
I/O	The DMC is supplied with the new AMS NEVE MIOS X Rack I/O rack for analogue and AES I/O. *Full range of AMS Neve Madi I/O can be added.*
Automation	Encore Plus™ automation system allowing projects to move between other consoles running Encore Automation.
DAW Control	DAW control over LAN.



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